



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/826,908      | 04/06/2001  | Nicolas Voyer        | 205699US2           | 6511             |

22850 7590 06/22/2005

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER

CHO, UN C

ART UNIT PAPER NUMBER

2687

DATE MAILED: 06/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/826,908

Applicant(s)

VOYER, NICOLAS

Examiner

Un C Cho

Art Unit

2687

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 February 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1,5,9,12,16 and 20 is/are rejected.  
7) ☐ Claim(s) 2-4,6-8,10,11,13-15,17-19,21 and 22 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 1 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 5, 9, 12, 16 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Cedervall et al. (US 6,671,514).

Regarding claim 1, Cedervall discloses a method of determining the position of a mobile station in a mobile telecommunication network, said network including a plurality of base stations controlled by a control unit (base transceiver stations Fig. 2, 12, 12A and 12B, it is inherent as evidenced by the fact that one of ordinary skill in the art would have recognized that control units are either within the BTS (Base Transceiver Station) or a BSC (Base Station Controller) connected to a BS to control its function), designed to adopt at least a first state corresponding to periods of transmission of signals useful to said mobile station

for determining said position (base stations transmitting signals to mobile station, Col. 5, lines 38 – 50), and a second state corresponding to periods of silence during which no signal is transmitted (turning off the base station, Fig. 2, 12, that is located closer mobile station, Col. 6, lines 44 – 67) comprising arranging by said control unit said periods of transmission and the periods of silence in cycles including at least one period of silence (silent period), wherein a cycle allocated to a base station is identical to a cycle allocated to any base station adjacent to it, but is offset in time from it (it has to be offset in time otherwise it would create interference among signals transmitted by the base stations, Col. 7, lines 36 – 67).

Regarding claim 5, Cedervall discloses that in addition to at least one telecommunication signals transmission period (base stations transmitting signals to mobile station, Col. 5, lines 38 – 50) and at least one period of silence (turning off the base station, Fig. 2, 12, that is located closer mobile station, Col. 6, lines 44 – 67), a period of transmitting specific location signals (Col. 5, line 59 through Col. 6, line 4).

Regarding claim 9, Cedervall discloses that each base station in the network, in order to be controlled, receives two items of information, first, an item of information representing the scheme of the cycle allocated to it and second, an item of information representing the offset in time of its cycle with respect to a reference (transmit a time signal to the pertinent base stations involved for adjusting the periodicity of the idle periods, Col. 7, lines 45 – 65).

Regarding claim 12, the claim is interpreted and rejected for the same reason as set forth in claim 1.

Regarding claim 16, the claim is interpreted and rejected for the same reason as set forth in claim 5.

Regarding claim 20, the claim is interpreted and rejected for the same reason as set forth in claim 9.

***Allowable Subject Matter***

4. Claims 2 – 4, 6 – 8, 10, 11, 13 – 15, 17 – 19, 21, 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 2, Cedervall, Bi, Falco, Dam, Vannucci and Kangas either alone or in combination fails to teach that each of said offsets in time is equal to a sub-multiple of the duration of said cycle.

Regarding claim 3, Cedervall, Bi, Falco, Dam, Vannucci and Kangas either alone or in combination fails to teach that the number of periods of silence per cycle is greater than one and in that the interval of time between two adjacent periods of silence is equal to a base period, which is sub-multiple of the duration of a cycle.

Regarding claim 6, Cedervall, Bi, Falco, Dam, Vannucci and Kangas either alone or in combination fails to teach that the interval of time between two periods of transmitting adjacent location signals, the one between a period of transmitting location signals and a period of silence which are adjacent, the one between a period of silence and a period of transmitting locations which are adjacent and the one between two adjacent periods of silence are identical and equal to the base period.

Regarding claim 7, Cedervall, Bi, Falco, Dam, Vannucci and Kangas either alone or in combination fails to teach that the transmission power of the specific location signals is higher than the transmission power of the telecommunication signals.

Regarding claim 8, Cedervall, Bi, Falco, Dam, Vannucci and Kangas either alone or in combination fails to teach that the periods of transmission of the location signals are of the same duration as the periods of silence.

Regarding claim 10, Cedervall, Bi, Falco, Dam, Vannucci and Kangas either alone or in combination fails to teach that the base stations in the network are grouped together by identical groups of adjacent base stations, the base stations in the same group having the same cycle scheme but different offsets and two base stations which correspond to each other in pairs from one group to another having their offsets in time equal.

Regarding claim 13, the claim is interpreted and objected for the same reason as set forth in claim 2.

Regarding claim 14, the claim is interpreted and objected for the same reason as set forth in claim 3.

Regarding claim 17, the claim is interpreted and objected for the same reason as set forth in claim 6.

Regarding claim 18, the claim is interpreted and objected for the same reason as set forth in claim 7.

Regarding claim 19, the claim is interpreted and objected for the same reason as set forth in claim 8.

Regarding claim 21, the claim is interpreted and objected for the same reason as set forth in claim 10.

### ***Response to Arguments***

6. Applicant's arguments filed 2/4/2005 have been fully considered but they are not persuasive.

The applicant argued that the reference presented by the examiner fails to teach the claimed invention. The examiner disagrees and the reasoning is as followed.

Regarding claim 1, the applicant argued that the arrangement of the periods of silence in Cedervall is done via interaction of the base stations in the network, while in the applicant invention the arrangement is done by the control unit. Cedervall discloses a method of determining the position of a mobile station in a mobile telecommunication network, said network including a plurality of base

stations controlled by a control unit (base transceiver stations Fig. 2, 12, 12A and 12B, it is inherent as evidenced by the fact that one of ordinary skill in the art would have recognized that control units are either within the BTS (Base Transceiver Station) or a BSC (Base Station Controller) connected to a BS to control its function), designed to adopt at least a first state corresponding to periods of transmission of signals useful to said mobile station for determining said position (base stations transmitting signals to mobile station, Col. 5, lines 38 – 50), and a second state corresponding to periods of silence during which no signal is transmitted (turning off the base station, Fig. 2, 12, that is located closer mobile station, Col. 6, lines 44 – 67) comprising arranging by said control unit said periods of transmission and the periods of silence in cycles including at least one period of silence (silent period), wherein a cycle allocated to a base station is identical to a cycle allocated to any base station adjacent to it, but is offset in time from it (it has to be offset in time otherwise it would create interference among signals transmitted by the base stations, Col. 7, lines 36 – 67). Therefore, the rejection mailed on 11/18/2004 stands.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bi et al. (US 6,163,696) discloses methods and apparatus for estimating mobile station location in a wireless communication system.



Bi et al. (US 6,438,380) discloses a more accurate system for estimating the location of a mobile telephone without significantly increasing the interference level for other mobile telephones in the same or neighboring cells.

Falco et al. (US 6,493,539) discloses providing an accurate timing source for locating the geographical position of a mobile.

Dam (US 6,223,040) discloses in a cellular mobile radio system, co-channel radio base stations are provided with a time reference signal being synchronizing signal or a time reference from another co-channel radio base station.

Vannucci (US 6,381,464) discloses methods and apparatus for estimating mobile location in a wireless communication system including a plurality of base stations.

Kangas et al. (US 6,490,454) discloses a mobile communication station in a wireless communication network used to measure the respective times of arrival of radio signals respectively transmitted by a plurality of radio transmitters in the network.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not


Art Unit: 2687

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Un C Cho whose telephone number is (571) 272-7919. The examiner can normally be reached on M ~ F 8:00AM to 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**SONNY TRINH**  
**PRIMARY EXAMINER**

Un C Cho  
Examiner  
Art Unit 2687

6/15/05 UC